

EXHIBIT B

**EXHIBIT B**  
**MARKED UP COPY OF THE AMENDED CLAIMS**  
**U.S. PATENT APPLICATION NO. 09/509,283**  
**ATTORNEY DOCKET NO. 7853-215**

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71. (Three times amended) A monoclonal antibody that recognizes a human 8F4 polypeptide [or a fragment thereof], wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,

wherein the human 8F4 polypeptide is recognized by the antibody deposited with the Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH ("DSMZ") and assigned accession no. DSM ACC2539;

and wherein the monoclonal antibody, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates proliferation of human T lymphocytes.

76. (Three times amended) A monoclonal antibody that recognizes a human 8F4 polypeptide [or a fragment thereof], wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,

wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;

wherein the monoclonal antibody, when immobilized on a solid surface and in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates proliferation of human T lymphocytes;

and wherein the monoclonal antibody inhibits [a biological activity of] costimulation of T lymphocytes by the human 8F4 polypeptide.

78. (Three times amended) A hybridoma that produces a monoclonal antibody that recognizes a human 8F4 polypeptide [or a fragment thereof], wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,

wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;

and wherein the hybridoma produces a monoclonal antibody that, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates proliferation of human T lymphocytes.

83. (Three times amended) A hybridoma that produces a monoclonal antibody that recognizes a human 8F4 polypeptide [or a fragment thereof], wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and

d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE, wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;

wherein hybridoma produces a monoclonal antibody,

wherein the monoclonal antibody, when immobilized on a solid surface and in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates proliferation of human T lymphocytes;

and wherein the monoclonal antibody inhibits [a biological activity of] costimulation of T lymphocytes by the human 8F4 polypeptide.

85. (Three times amended) A pharmaceutical composition comprising a monoclonal antibody that recognizes a human 8F4 polypeptide [or a fragment thereof], wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and

d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE, wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;

and wherein the pharmaceutical composition comprises a monoclonal antibody that, in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates proliferation of human T lymphocytes.

86. (Three times amended) A pharmaceutical composition comprising a monoclonal antibody that recognizes a human 8F4 polypeptide [or a fragment thereof], wherein said 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;
- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE,

wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539;

and wherein the pharmaceutical composition comprises a monoclonal antibody;  
wherein the monoclonal antibody, when immobilized on a solid surface and in conjunction with anti-CD3 monoclonal antibody OKT3, costimulates proliferation of human T lymphocytes;

and wherein the monoclonal antibody inhibits [a biological activity of] costimulation of T lymphocytes by the human 8F4 polypeptide.

88. (Amended) A method for producing the monoclonal antibody of claim 71 or 76, comprising: culturing an antibody-secreting hybridoma obtained by:

- (i) fusion of a myeloma cell line cell with a spleen cell of a mouse immunized with 2-signal-activated human T lymphocytes; and
- (ii) selection of a hybridoma that produces said antibody,

such that the monoclonal antibody is produced.

97. (Three times amended) A method of producing a human 8F4 polypeptide-specific monoclonal antibody, comprising: culturing an antibody-secreting hybridoma obtained by (i) fusion of a myeloma cell line cell with a spleen cell of a mouse immunized with an antigen comprising a human 8F4 polypeptide and (ii) selection of a hybridoma that produces said antibody, wherein said human 8F4 polypeptide:

- a) is an inducible T cell costimulatory molecule;
- b) occurs on two-signal-activated human T lymphocytes;

- c) exhibits a molecular weight of about 55 to 60 kilodaltons as determined by non-reducing sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE); and
- d) is a dimer of two peptide chains exhibiting molecular weights of about 27 kilodaltons and 29 kilodaltons, as measured by reducing SDS-PAGE, and wherein the human 8F4 polypeptide is recognized by the antibody deposited with the DSMZ and assigned accession no. DSM ACC2539; such that the monoclonal antibody is produced.